



IN THE UNITED STATES PATENT DESIGNATED OFFICE

In re the application of: Galina V. Mukamolova, *et al.*

Serial No.: 09/445,289

Filed: May 11, 2000

For: *BACTERIAL PHEROMONES AND USES THEREFOR*

Attorney Docket No.: FHW-051US

Group Art Unit: 1645

Examiner: Devi, S.

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Date of Deposit: June 9, 2003

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I hereby certify that this 37 CFR 1.53(b) request and the documents referred to as attached therein are being deposited with the United States Postal Service on the date indicated above in an envelope as "Express Mail Post Office to Addressee" service under 37 CFR 1.10 and addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

Peter C. Lauro, Esq., Reg. No. 32,360

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RESPONSE

Dear Sir:

This is a response to the Office Action dated April 23, 2003 (Paper No. 21). Claims 126-147 are pending in the instant application, and are subject to restriction.

The Office Action, on page 2, requires restriction to one of the following groups under 35 U.S.C. §121:

Group I: claims 126-131 and 144 (drawn to a method for resuscitating bacterial cells by contacting with an isolated polypeptide having at least 20% to 50% identity with residues 117-184 of SEQ ID NO:2, classified in class 435, subclass 252.1);

- Group II: claims 126-131 and 144 (drawn to a method for resuscitating bacterial cells by contacting with an isolated polypeptide with at least 50% identity with residues 224-318 of SEQ ID NO:11, classified in class 435, subclass 252.1);
- Group III: claims 126-131 and 144 (drawn to a method for resuscitating bacterial cells by contacting with an isolated polypeptide of SEQ ID NO:43, classified in class 435, subclass 252.1);
- Group IV: claims 132-134 and 145-147 (drawn to a pharmaceutical composition, a method and a kit comprising a polypeptide with at least 20% to 50% identity with residues 117-184 of SEQ ID NO: 2, classified in class 424, subclass 190.1);
- Group V: claims 132-134 and 145-147 (drawn to a pharmaceutical composition, a medium and a kit comprising a polypeptide with at least 50% identity with residues 224-318 of SEQ ID NO: 11, classified in class 424, subclass 190.1);
- Group VI: claims 132-134 and 145-147 (drawn to a pharmaceutical composition, a medium and a kit comprising a polypeptide of SEQ ID NO: 43, classified in class 424, subclass 190.1);
- Group VII: claims 135-139 (drawn to a method for resuscitating bacterial cells by contacting with an antibody to an isolated polypeptide with at least 20% to 50% identity with residues 117-184 of SEQ ID NO: 2, classified in class 935, subclass 108);
- Group VIII: claims 135-139 (drawn to a method for resuscitating bacterial cells by contacting with an antibody to an isolated polypeptide with at least 50% identity with residues 224-318 of SEQ ID NO:11, classified in class 935, subclass 108);
- Group IX: claims 135-139 (drawn to a method for resuscitating bacterial cells by contacting with an antibody to an isolated polypeptide of SEQ ID NO:11, classified in class 935, subclass 108);
- Group X: claims 140-143 (drawn to a method for resuscitating bacterial cells by introducing into cells a nucleic acid encoding a polypeptide with at least 20% to 50% identity with residues 117-184 of SEQ ID NO:2, classified in class 935, subclass 52);

- Group XI: claims 140-143 (drawn to a method for resuscitating bacterial cells by introducing into cells a nucleic acid encoding a polypeptide having at least 50% identity with residues 2240-318 of SEQ ID NO:11, classified in class 935, subclass 52); and
- Group XII: claims 140-143 (drawn to a method for resuscitating bacterial cells by introducing into cells a nucleic acid encoding a polypeptide SEQ ID NO:43, classified in class 935, subclass 52).

Applicants are required to elect one of the above groups for prosecution on the merits. Applicants respectfully traverse the requirements for restriction and election, and submit that the requirements are improper. ***Applicants note that no lack of unity of invention rejection was made during the PCT phase of the corresponding international application.***

First, Applicants assert that the subject matter of these groups represent different embodiments of a single inventive concept for which a single patent should issue. The pending claims represent an intricate web of knowledge, continuity of effort, and consequences of a single invention, which merit examination of all of these claims in a single application. More particularly, all the claims are linked by a single, searchable, unifying aspect; *i.e.*, the resuscitation of dormant, moribund or latent bacterial cells using a new class of bacterial cytokines or pheromones; *i.e.*, polypeptides expressed by bacteria that regulate the growth or multiplication of the bacterial cells by acting as signaling moieties in conjunction with cognate cellular receptors.

Second, Applicants submit that a sufficient search and examination with respect to the subject matter of all claims can be made without serious burden. As the M.P.E.P. states:

If the search and examination of an entire application can be made without serious burden, the examiner must examine it on the merits, even though it includes claims to independent or distinct inventions.

M.P.E.P. § 803 (7th ed., Rel. 78A, March 1999).

That is, even if the above-enumerated groups of claims are drawn to distinct inventions, the Examiner must still examine the entire application on the merits because doing so will not result in a serious burden.

Applicants submit that the search and examination of all the claims will have substantial overlap, and no serious burden will result from searching and examining all claims in the same application. In fact, Groups I, II and III, Groups IV, V and VI, Groups VII, VIII and IX, and Groups X, XI and XII have *exactly the same classification*; i.e., class 435, subclass 252.1, class 424, subclass 190.1, class 935, subclass 108, and class 935, subclass 52, respectively. Also, Groups VII, VIII and IX and Groups X, XI and XII share the same classification, namely class 935.

Given the single, searchable, unifying aspect (special technical feature) that links the claims, the identity of classification and the powerful computer-based search engines and data bases at the Examiner's disposal, Applicants submit that no serious burden will result from searching and examining all claims in the same application. Therefore, in the interest of savings of time and cost to Applicants and the Patent Office, Applicants respectfully request that all the claims be searched and examined in a single application. At a minimum, Applicants request that Groups I, II and III be rejoined into a single group; Groups IV, V and VI be rejoined into a single group; Groups VII, VIII and IX be rejoined into a single group; and Groups X, XI and XII be rejoined into a single group. Surely, restriction to four groups would be more reasonable than the twelve groups proposed by the Examiner, especially in view of the fact that the International Searching Authority found no lack of unity of invention in the corresponding PCT international application.

Nevertheless, in compliance with the directives in the Office Action and in order to expedite prosecution of the instant application, Applicants hereby provisionally elect, subject to the foregoing traverse, Group I, claims 126-131 and 144 (drawn to a method for resuscitating bacterial cells by contacting with an isolated polypeptide having at least 20% to 50% identity with residues 117-184 of SEQ ID NO:2).

If a telephone conversation with Applicants' Attorney would expedite the prosecution of the above-identified application, the Examiner is urged to call Applicants' Attorney at (617) 227-7400.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Peter Lauro", written over a horizontal line.

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